



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,353	09/05/2001	Alfred Heinzl		3131

27187 7590 03/25/2005
BAKER & DANIELS
205 W. JEFFERSON BOULEVARD
SUITE 250
SOUTH BEND, IN 46601

EXAMINER

SHARMA, RASHMI K

ART UNIT	PAPER NUMBER
----------	--------------

3651

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,353

Applicant(s)

HEINZL ET AL.

Examiner

Rashmi K. Sharma

Art Unit

3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “the resilient arms being connected at the bottom side thereof to the outer wall” in claim 4 and “chain links having different accommodation cavities for different components or component stages” in claim 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 10, 14, 15 and 20 are objected to because of the following informalities: it appears that claim 10 line 1 should recite "said chain link", claim 14 line 3 should recite "in the longitudinal direction", claim 15 line 4 should recite "said chain links", claim 20 lines 1-2 should recite said chain link". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 7, 8, 10, 12, 14-16, 18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "...and which each have one accommodation cavity...". The term "each" deems the claim indefinite. Does Applicant intend to mean each chain link? If so, the term "said chain link" is suggested to replace the term "each".

Claim 1 recites the limitation "the wall" in line 5, claim 2, 7 and 8 recites the limitation "the direction" in line 2, claim 3 line 2 recites "the full height" and "the outer ends", claim 3 line 3 recites "the inside", claim 4 line 2-3 recites "the bottom side", claim 4 line 3 recites "to the outer wall" and "the upper ends", claim 5 line 1 recites "the

Art Unit: 3651

outside", claim 7 line There is insufficient antecedent basis for this limitation in the claim 10 line 2 recites "the opposite", claim 12 line 1 recites "the pins", claim 14 line 1 recites "the sides", claim 14 line 5 recites "the level", claim 15 line 2 recites "the opposite side", claim 16 line 1 and 2 recites "the height", claim 18 line 5 recites "the wall", claim 18 line 6 recites "to the other", claim 20 line 2 recites "the opposite". There is insufficient antecedent basis for these limitations in the claims.

The term "transversely to the direction of insertion of the small components" in claim 7 is a relative term which renders the claim indefinite. The term " transversely to the direction of insertion of the small components " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The term "perpendicularly to the direction of insertion of the small components" in claim 8 is a relative term which renders the claim indefinite. The term "perpendicularly to the direction of insertion of the small components " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 18 recites "...where one wall..." in line 5. It is unclear as to whether this particular wall is a new wall in addition to the "two walls" previously recited. Further clarification is required.

Claim Rejections - 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 11, 15, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253).

Matsuzoe discloses a transport system for small components, arranged in series comprising a chain having a plurality of chain links (2) in which the small components are accommodated in an accommodation cavity (1) within each chain link (2), the accommodation cavity (1) having at least 2 walls where one wall is rigid (see Figure 1 or 2, either 13 or any of the L-shaped members within the inner walls where the small component is seated), a central web (center of 13) extending in the direction of insertion of the small components, having arms (both ends of 13) laterally extending therefrom and extending over the full height of the accommodation cavity (1) thereby corresponding to the height of the small components and the outer ends of the arms each having a bead directed towards the inside (see Figure 2). Matsuzoe also discloses the arms having their upper ends being freestanding, the outside rigid wall having a slope (see figure 1), the accommodation cavity (1) having a through opening (17), the chain links (2) are made by plastics injection molding (please read column 1

Art Unit: 3651

lines 41-46 and 53-55) and wherein the chain links (2) have different accommodation cavities for different components or component stages (please read column 4 lines 65-67). Matsuzoe also discloses chain links (2) being pivotable about pins (6a) transversely or perpendicularly (please refer to Figure 8) to the direction of insertion of the small components in the accommodation cavity (1) and wherein the chain links (2) on one side have two lateral arms (5) with bores (5a) and on an opposite thereof, have two lateral arms (6) with axle-type projections (6a) whereby the axle-type projections latchingly engage the bores upon assembly of the chain links.

Matsuzoe fails to disclose the resilient wall oriented opposite of the rigid wall.

Forster et al. does disclose a resilient wall (28) oriented opposite a rigid wall (26).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the wall arrangement of Matsuzoe's invention with that of Forster's resilient wall, thereby arranging the resilient wall opposite to the Matsuzoe's rigid wall to provide for a range of different sized components as well as to provide for a more secure holding arrangement of the small components while they are being conveyed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253) and further in view of McBain et al. (U.S. Patent number 4,060,978).

Matsuzoe as disclosed above, fails to disclose chain links connected via two pins arranged perpendicularly to each other, thereby creating an arrangement of some pins being parallel to the accommodation cavity and some pins being transverse to the accommodation cavity.

McBain et al. does disclose chain links connected via two pins arranged perpendicularly to each other.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pin arrangement of Matsuzoe's invention with that of McBain's pin arrangement in order to provide for chain links that are much more easily capable of being conveyed along a curved path, either laterally or vertically, with respect to the conveying direction.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253) and further in view of Hodlewsky (U.S. Patent number 4,586,601).

Matsuzoe as disclosed above, fails to disclose a chain link side having a central arm with a bore for accommodating a pin, opposing a chain link side having two lateral arms with bores.

Hodlewsky does disclose a chain link side having a central arm with a bore for accommodating a pin, opposing a chain link side having two lateral arms with bores (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the opposing side of the chain link of Matsuzoe's invention with the chain link side having a central arm with a bore of Hodlewsky's invention to provide for chain links that are much more easily capable of being conveyed along a curved path, either laterally or vertically, with respect to the conveying direction.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3651

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253) and further in view of Green et al. (U.S. Patent number 5,728,023).

Matsuzoe as disclosed above, fails to disclose metal pins.

Green et al. does disclose metal pins (please read column 3 lines 23-31 and column 4 line 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the plastic pins of Matsuzoe's invention with that of Green's metal pins in order to provide for much longer and more durable pin wear. It is well known in the art that metal pins last longer under larger amounts of stress than do plastic pins.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253) and further in view of Hodlewsky (U.S. Patent number 4,586,601) and still further in view of Tschunt et al. (U.S. Patent 3,788,450).

Art Unit: 3651

Matsuzoe as disclosed above, fails to show pins projecting laterally beyond the lateral arms.

Tschunt et al. does disclose pins projecting laterally beyond the lateral arms (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pin length of Matsuzoe's invention with that of the pin length of Tschunt's invention in order to provide for a more securely arranged chain link structure by increasing the amount of the bearing surface of the pin, thereby creating more strength and stability in the overall chain link structure.

Claim Rejections - 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253) and further in view of Lapeyre (U.S. Patent number 4,138,011).

Matsuzoe as disclosed above, fails to show formed projections along both longitudinal sides of the chain links, the projections having a width corresponding to the diameter of the pin and being on the same level of the pin.

Lapeyre does disclose formed projections (area around 25 and 25A in Figure 3) along both longitudinal sides of the chain links, the projections having a width corresponding to the diameter of the pin and being on the same level of the pin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chain link guides (3 and 4) of Matsuzoe's invention with that of the guides of Lapeyre's invention in order to provide for a variety of conveyor guide arrangements.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzoe (EP 0660655) in view of Forster et al. (U.S. Patent number 6,273,253) and further in view of McBain et al. (U.S. Patent number 4,060,978) and still further in view of Hodlewsky (U.S. Patent number 4,586,601).

Matsuzoe as disclosed above, fails to disclose a chain link side having a central arm with a bore for accommodating a pin, opposing a chain link side having two lateral arms with bores.

Hodlewsky does disclose a chain link side having a central arm with a bore for accommodating a pin, opposing a chain link side having two lateral arms with bores (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the opposing side of the chain link of Matsuzoe's invention with the chain link side having a central arm with a bore of Hodlewsky's invention to provide for chain links that are much more easily capable of being conveyed along a curved path, either laterally or vertically, with respect to the conveying direction.

Response to Arguments

Applicant's arguments, filed 12/6/2004, with respect to the rejection(s) of claim(s) 1-4 and 18 under 35 U.S.C. 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the above rejections.

Applicant argues that Matsuzoe does not render the claims obvious since, as suggested by the Applicant there would be no need to modify Matsuzoe to incorporate a resilient wall opposing the rigid wall, since Matsuzoe already discloses a positive locking arrangement for the small components. However, the Examiner would like to point to Figure 5 in Matsuzoe. As rejected above, the Examiner is relying on either reference numeral 13 or the L-shaped member (as can be seen in Figure 1) to the right of reference numeral 13 as meeting the limitation of a "rigid wall". Matsuzoe as seen in

Art Unit: 3651

viewing Figure 5, one can see that any resilient wall opposing the rigid wall of Matsuzoe would most certainly urge the small component toward either reference numeral 13 or the L-shaped member in which the small component is seated. Depending on the exact size of the small component, there appears to be sufficient space between the small component and either of these two "rigid walls" for urging movement to take place, therefore Matsuzoe does indeed render the above rejected claims obvious. While the Applicant argues that the resilient wall opposing the rigid wall arrangement is not necessary due to the positive locking arrangement of the small components in Matsuzoe's invention, the additional urging of Matsuzoe as modified by Forster et al. in combination with Matsuzoe's positive locking arrangement, allows for a much more secure retaining structure for holding the small components.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashmi K. Sharma whose telephone number is 703-306-5952. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3651

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600